REMARKS/ARGUMENTS

The Pending Claims

Claims 1-30 currently are pending. The pending claims are directed to fumed metal oxide particles and a process for producing the same. Reconsideration of the claims is respectfully requested in view of the remarks herein.

Summary of the Office Action

The Office Action maintains the rejections previously entered against the pending application (see non-final Office Action dated June 22, 2007). In particular, the Office Action sets forth the following rejections:

(a) claims 1-3, 7-10, 13-14, 17-18, 20, and 25-30 under 35 U.S.C. § 103 as allegedly obvious over U.S. Patent 5,340,560 (Rohr et al.) ("the Rohr '560 patent") in view of any one of U.S. Patent 6,565,823 (Hawtof et al.) ("the Hawtof '823 patent"), U.S. Patent 6,312,656 (Blackwell et al.) ("the Blackwell '656 patent"), and U.S. Patent 4,857,076 (Pearson et al.) ("the Pearson '076 patent");

(b) claims 11 and 12 under 35 U.S.C. § 103 as allegedly obvious over the Rohr '560 patent in view of U.S. Patent 5,075,090 (Lewis et al.) ("the Lewis '090 patent") and any one of the Hawtof '823 patent, the Blackwell '656 patent, and the Pearson '076 patent;

(c) claims 1-6 and 13-24 under 35 U.S.C. § 103 as allegedly obvious over U.S. Patent 6,887,566 (Hung et al.) ("the Hung '566 patent") in view of any one of the Hawtof '823 patent, the Blackwell '656 patent, and the Pearson '076 patent;

(d) claims 11 and 12 under 35 U.S.C. § 103 as allegedly obvious over the Hung '566 patent in view of any one of the Hawtof '823 patent, the Blackwell '656 patent, and the Pearson '076 patent.

Applicants request reconsideration and withdrawal of these rejections for the reasons set forth below.

Discussion of the Obviousness Rejections

A. The Rohr '560 Patent In Combination With Other References

The Office Action maintains the previous rejection of claims 1-3, 7-10, 13-14, 17-18, 20, and 25-30 as allegedly obvious over the Rohr '560 patent in combination with any one of the Hawtof '823 patent, the Blackwell '656 patent, and the Pearson '076 patent. The Office Action also maintains the rejection of claims 11 and 12 as allegedly obvious over the Rohr '560 patent in combination with the Lewis '090 patent and any one of the Hawtof '823 patent, the Blackwell '656 patent, and the Pearson '076 patent.

The process for producing fumed metal oxides defined by rejected claim 1 comprises (a) providing a stream of a liquid feedstock comprising a volatizable non-halogenated metal oxide precursor; (b) providing a stream of a combustion gas having a linear velocity that atomizes and combusts or pyrolyzes the liquid feedstock; (c) injecting the stream of the liquid feedstock into the stream of combustion gas to thereby atomize the liquid feedstock and form a reaction mixture comprising the combustion gas and the atomized liquid feedstock; and (d) subjecting the atomized liquid feedstock to a sufficient temperature and residence time in the combustion gas stream for fumed metal oxide particles to form before the combustion gas temperature is reduced below the solidifying temperature of the fumed metal oxide particle. Claims 2-3, 7-14, 17-18, and 20 are directly or indirectly dependent on, and therefore include all of the limitations of, claim 1, while claims 25-30 recite the product resulting from the claimed process.

The Rohr '560 patent, the Lewis '090 patent, the Hawtof '823 patent, the Blackwell '656 patent, and the Pearson '076 patent – individually and collectively – fail to disclose or suggest a stream of liquid feedstock that is atomized by injection into the stream of combustion gas. In particular, none of these references discloses or suggests element (c) of claim 1, which reads, in relevant part: "injecting the stream of the liquid feedstock into the stream of combustion gas to thereby atomize the liquid feedstock."

While the Office Action alleges that Applicants have addressed these references only individually (Office Action, p. 2), Applicants note that element (c) of claim 1 is not disclosed

or suggested in the cited references *whether considered individually or collectively in any combination.*

The Office Action attempts to deal with this significant difference between the claimed subject matter and the combined disclosures of the cited references by (a) construing the pending claims as "not requir[ing] that the injection itself is responsible for the atomization or the kinetic energy of the combustion gas" and then (b) asserting that the Hawtof '823 patent and the Blackwell '656 patent disclose that the kinetic energy of the carrier gas is sufficient to atomize the liquid feedstock, which disclosures are alleged to be sufficient to satisfy the atomization requirement of the pending claims. In addition, the Office Action does not allege that any of the other cited references, i.e., the Rohr '560 patent, the Lewis '090 patent, and the Pearson '076 patent, disclose or suggest element (c) of claim 1, and indeed these references do not do so.

Contrary to the Office Action's assertions, however, the claim language does require that injection itself is responsible for atomization: "*injecting* the stream of the liquid feedstock into the stream of combustion gas *to thereby atomize* the liquid feedstock" (see element (c) of claim 1). The specification accompanying the pending claims affirms this requirement: "the liquid feedstock can be fed to the nozzle under pressure, which ensures that the stream of the liquid feedstock exits the nozzle [i.e., is injected into the stream of combustion gas] with sufficient force to atomize the liquid feedstock" (para. 0024 of the specification). Accordingly, the pending claims do require that the injection itself is responsible – at least in part – for the atomization of the liquid feedstock, and none of the cited references – especially the Hawtof '823 patent and the Blackwell '656 patent – discloses or suggests that the *injection* of the stream of the liquid feedstock into the stream of combustion gas *atomizes* the liquid feedstock, as required by the pending claims.

Accordingly, the combination of the cited references fails to disclose or suggest all of the limitations of the pending claims, and the subject matter of the pending claims cannot properly be considered obvious over the combination of the cited references.

For the foregoing reasons, the obviousness rejections based on the Rohr '560 patent in combination with other references are improper and should be withdrawn.

B. The Hung '566 Patent In Combination With Other References

As explained in Applicants' "Reply to Office Action" dated September 24, 2007, the Hung '566 patent cannot be utilized as prior art under 35 U.S.C. § 103 against the claimed invention.

In particular, the Hung '566 patent qualifies as prior art to the present application only under 35 U.S.C. § 102(e). However, since the Hung '566 patent and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person, namely Cabot Corporation, as evidenced by the recorded assignments for the Hung '566 patent and the present application, the Hung '566 patent cannot be relied upon in support of a rejection of the claimed invention under 35 U.S.C. § 103.

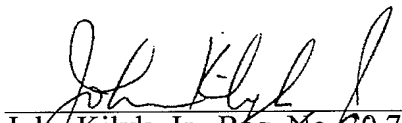
Accordingly, the obviousness rejections based on the Hung '566 patent in combination with other references are improper and should be withdrawn.

Applicants note that the Office Action fails to address the impropriety of utilizing the Hung '566 patent as prior art to support the obviousness rejections but nevertheless improperly maintains the obviousness rejections based on the Hung '566 patent.

Conclusion

Applicants respectfully submit that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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